

Appl. No. 10/006,532  
Amdt. dated October 29, 2003  
Reply to Office Action of August 28, 2003

LISTING OF CLAIMS

1. (Previously Presented) A barrel assembly for a weapon, said barrel assembly including:
  - a barrel;
  - a plurality of projectile assemblies axially disposed in end to end abutting relationship within said barrel for operative sealing engagement with the bore of the barrel, each projectile assembly including a projectile head and an integral cylindrical spacer portion extending axially and rearwardly from said projectile head; discrete propellant charges accommodated within said cylindrical spacer portion for propelling respective projectile assemblies sequentially through the muzzle of the barrel;
  - ignition means for igniting said discrete propellant charges; and electrical control means for selectively and sequentially actuating the ignition means.
2. (Original) The barrel assembly as claimed in Claim 1 wherein a rearward end of the cylindrical spacer portion is adapted to abut the forward or leading end of the subsequent projectile assembly.
3. (Original) The barrel assembly as claimed in Claim 1 wherein the cylindrical spacer portion is expandable into operative sealing contact with said bore of the barrel.

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4. (Previously Presented) The barrel assembly as claimed in Claim 3 wherein the interior of the cylindrical spacer portion is structurally reinforced to prevent excessive radial expansion of the projectile assembly.

5. (Previously Presented) A barrel assembly for a weapon, said barrel assembly including:

a barrel having a muzzle;  
a plurality of projectile assemblies axially disposed in end to end abutting relationship within said barrel, each projectile assembly including a projectile head and a trailing cylindrical extension in close proximity with the barrel;  
an internal wedging surface, at or adjacent the trailing end of said cylindrical extension which accommodates a tapered nose part of the following projectile assembly, for expanding said trailing end into enhanced sealing engagement with the barrel upon engagement of said wedging surface with said tapered nose part;  
discrete propellant charges for propelling respective projectile assemblies sequentially through the muzzle of said barrel;  
ignition means disposed externally of the barrel for igniting said discrete propellant charges; and  
electrical control means for selectively and sequentially actuating said ignition means.

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6. (Original) The barrel assembly as claimed in Claim 5 wherein said trailing cylindrical extension at least partly defines a propellant space therein.

7. (Currently Amended) The barrel assembly as claimed in either Claim 5 or Claim 6 wherein propellant charges of said discrete propellant charges surround the noses of respective following projectile assemblies externally of the trailing cylindrical extension.

8. (Previously Presented) The barrel assembly as claimed in Claim 5 wherein each projectile assembly includes an internal spacer which extends through the trailing cylindrical extension from the projectile head to abut or cooperate with the inserted projectile head of a following projectile assembly, whereby axial compressive loads applied to a stack of abutting projectile assemblies arranged in sealing engagement within the barrel may be resisted.

9. (Currently Amended) The barrel assembly as claimed in Claim 5 wherein axial compressive loads applied said plurality of to a stack of abutting projectile assemblies arranged in sealing engagement within the said barrel may be distributed back to said barrel from individual projectile assemblies through their engagement with the said barrel.

10. (Currently Amended) The barrel assembly as claimed in Claim 5 wherein the trailing cylindrical extension is a thin cylindrical rear extension of the projectile head.

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11. (Original) The barrel assembly as claimed in Claim 8 wherein the internal spacer includes support members for the trailing cylindrical extension.

12. (Original) The barrel assembly as claimed in either Claim 8 or Claim 11 wherein the internal spacer is integral with the head and trailing cylindrical extension.

13. (Original) The barrel assembly as claimed in either Claim 8 or Claim 11 wherein the internal spacer is formed separately from the head and trailing cylindrical extension.

14. (Currently Amended) The barrel assembly as claimed in Claim 8 wherein, upon loading said plurality of respective projectile assemblies into the said barrel and, thereafter causing an axial displacement of the said projectile assemblies causes radial expansion of said trailing ends thereof to enhance the sealing engagement between the said projectile assemblies and the said barrel.

15. (Previously Presented) The barrel assembly as claimed in Claim 14 wherein the axial displacement is suitably caused to said projectile assemblies individually, subsequent to each projectile assembly being loaded into the barrel.

16. (Previously Presented) The barrel assembly as claimed in either Claim 14 or Claim 15 wherein the radial expansion into enhanced sealing engagement with the barrel is limited through engagement between the penetrating nose of a following projectile assembly and the internal spacer.

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17. (Previously Presented) The barrel assembly as claimed in Claim 1 wherein said cylindrical spacer portion is in operative sealing engagement with the bore of said barrel.